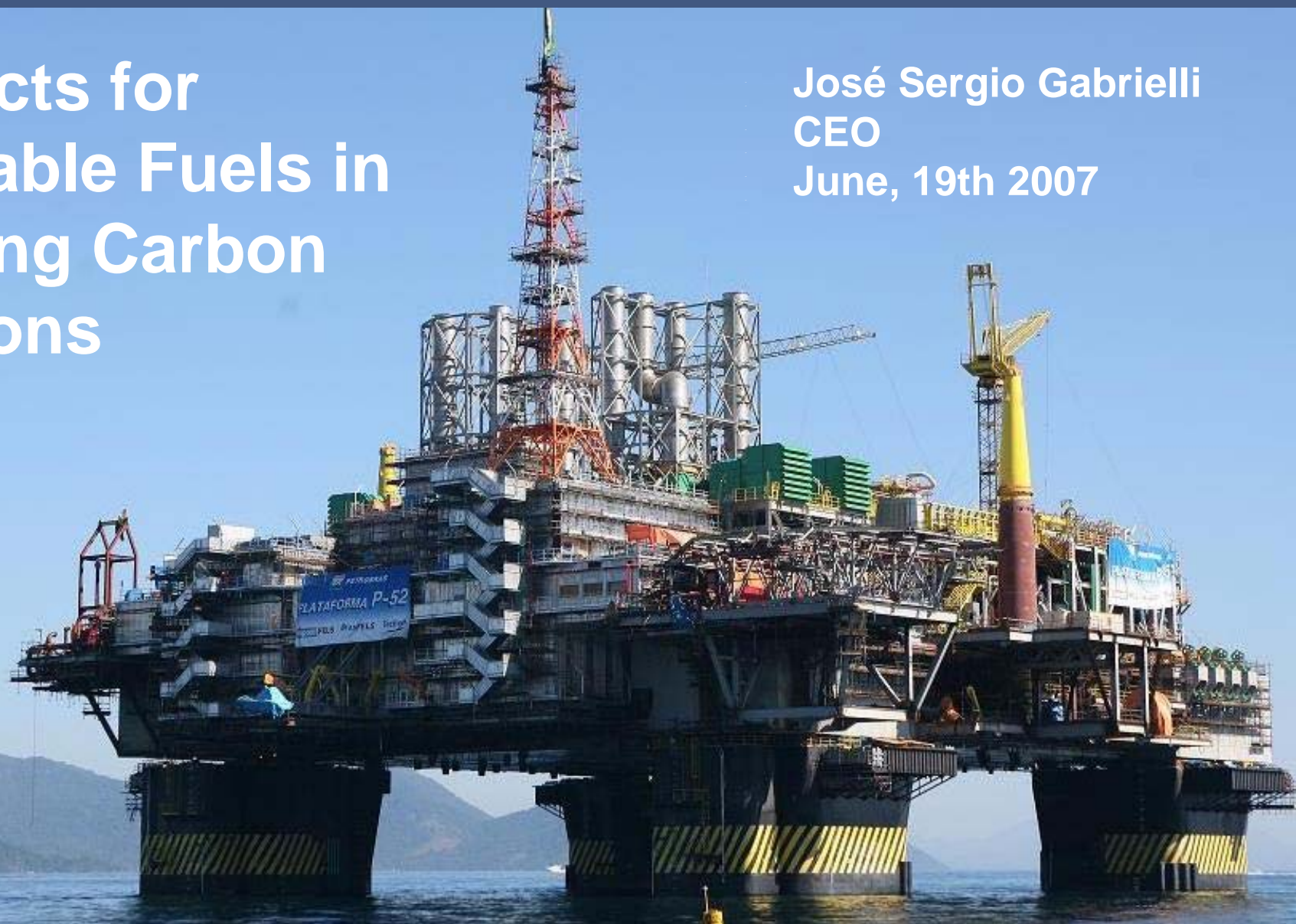


Financial Times Conference

Prospects for Renewable Fuels in Reducing Carbon Emissions

José Sergio Gabrielli
CEO
June, 19th 2007



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Cautionary Statement

The presentation may contain forecasts about future events. Such forecasts merely reflect the expectations of the Company's management. Such terms as "anticipate", "believe", "expect", "forecast", "intend", "plan", "project", "seek", "should", along with similar or analogous expressions, are used to identify such forecasts. These predictions evidently involve risks and uncertainties, whether foreseen or not by the Company. Therefore, the future results of operations may differ from current expectations, and readers must not base their expectations exclusively on the information presented herein. The Company is not obliged to update the presentation/such forecasts in light of new information or future developments.

Cautionary Statement for US investors

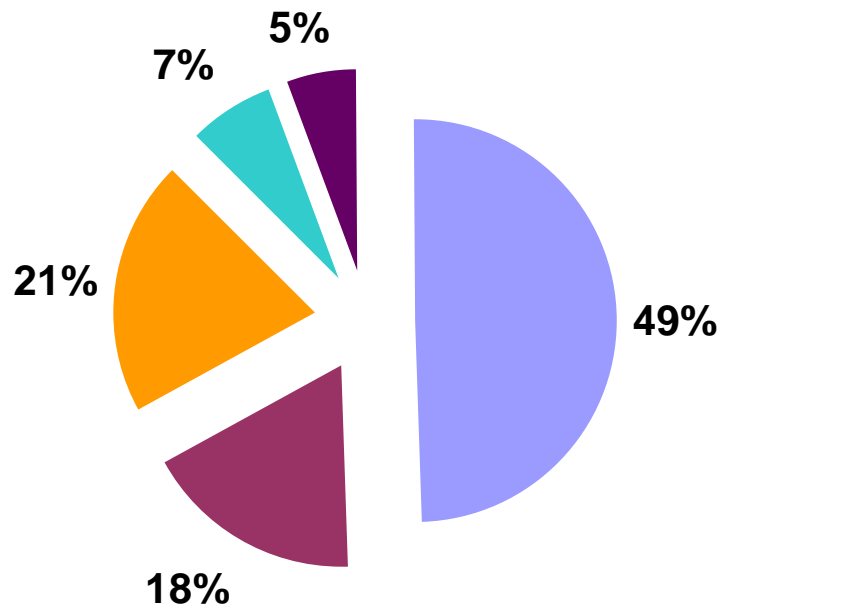
The United States Securities and Exchange Commission permits oil and gas companies, in their filings with the SEC, to disclose only proved reserves that a company has demonstrated by actual production or conclusive formation tests to be economically and legally producible under existing economic and operating conditions. We use certain terms in this presentation, such as oil and gas resources, that the SEC's guidelines strictly prohibit us from including in filings with the SEC.



- Projected increases in global energy demand and emissions dominated by power, and industry that represent 49% and 18% of projected CO2 emissions through 2030;
- Transport sector dominated by oil represents only 21% of projected increase in CO2 emissions through 2030.

World Energy-Related CO₂ Emissions by Sector

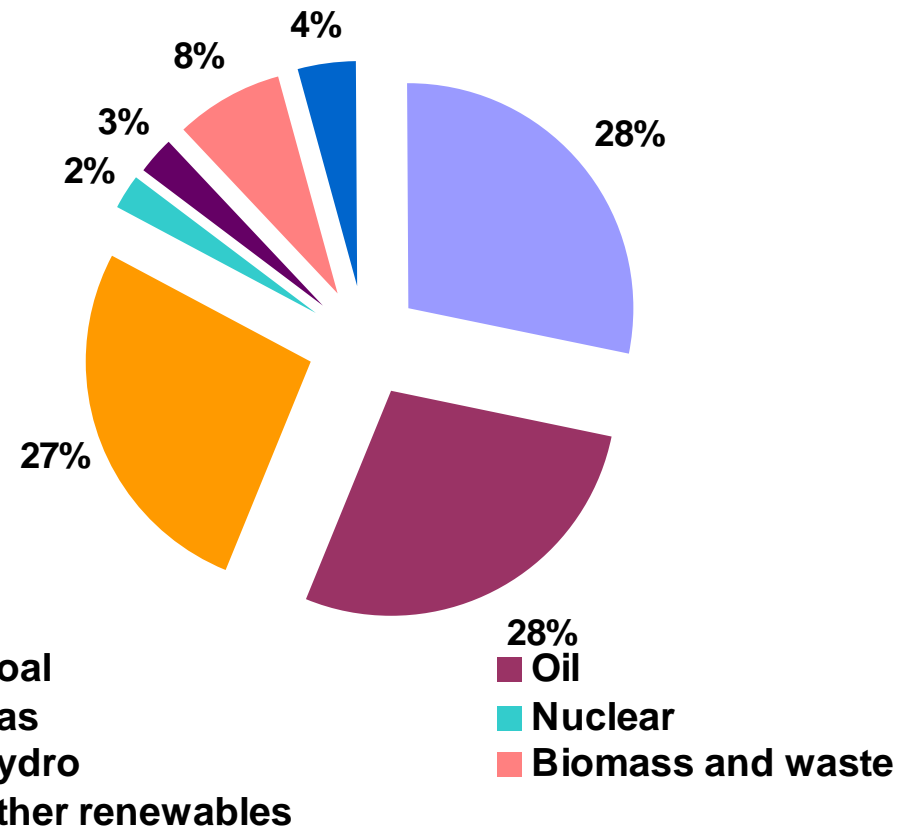
Increase 2004-2030 (14,341 million tonnes)



- Power Generation
- Transport
- Other**
- Industry
- Residential Services*

World Primary Energy Demand

Increase 2004-2030 (5,891 million tonnes)

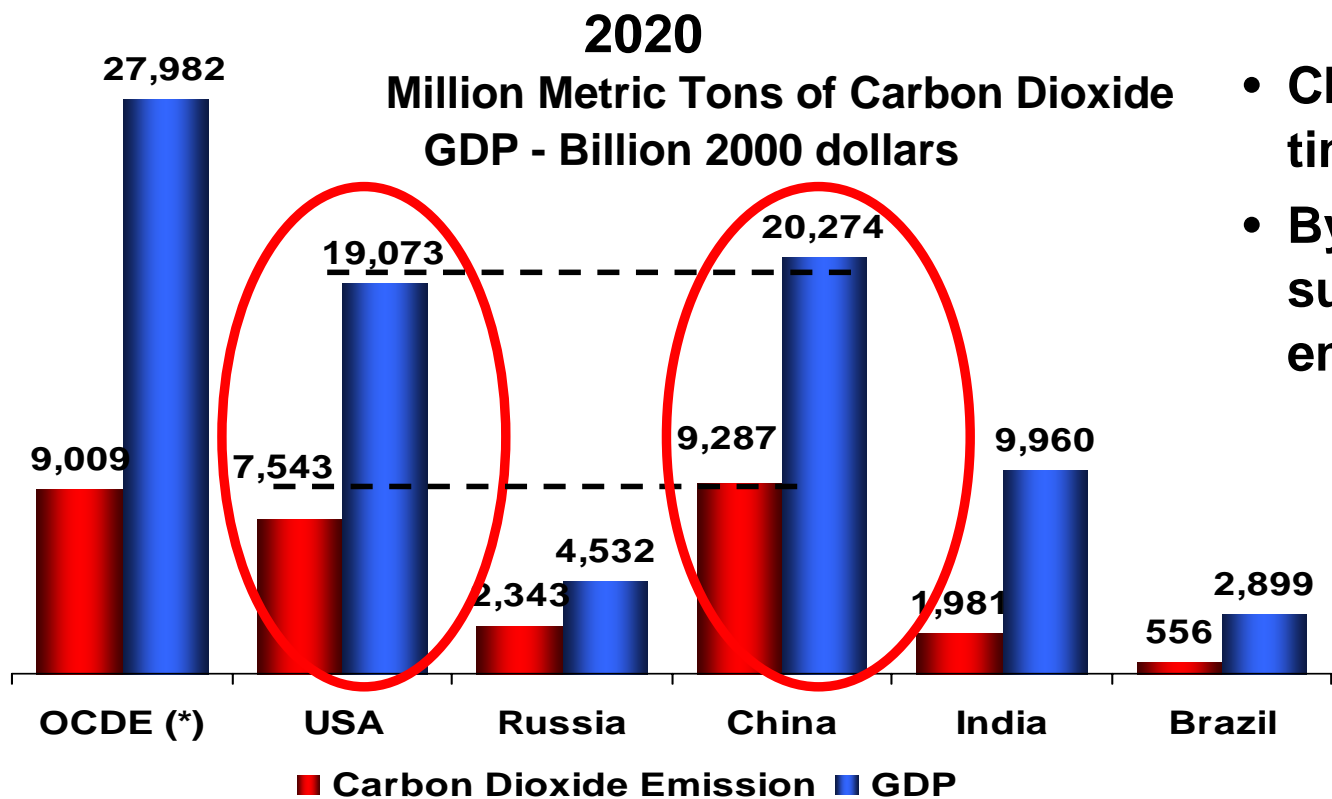


- Coal
- Gas
- Other renewables
- Oil
- Nuclear
- Biomass and waste

* Includes agriculture and public sector

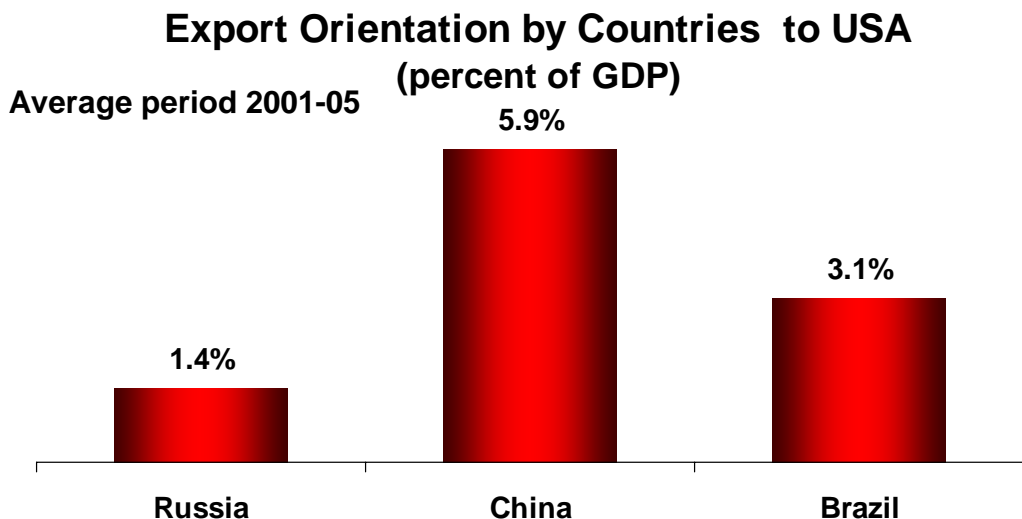
** Includes international marine bunkers, other transformation and non-energy use

Chinese industrialization distorts all emission projections



- China emissions are growing 10 times faster than US;
- By 2020 China GDP will have surpassed US GDP but so will CO2 emissions.

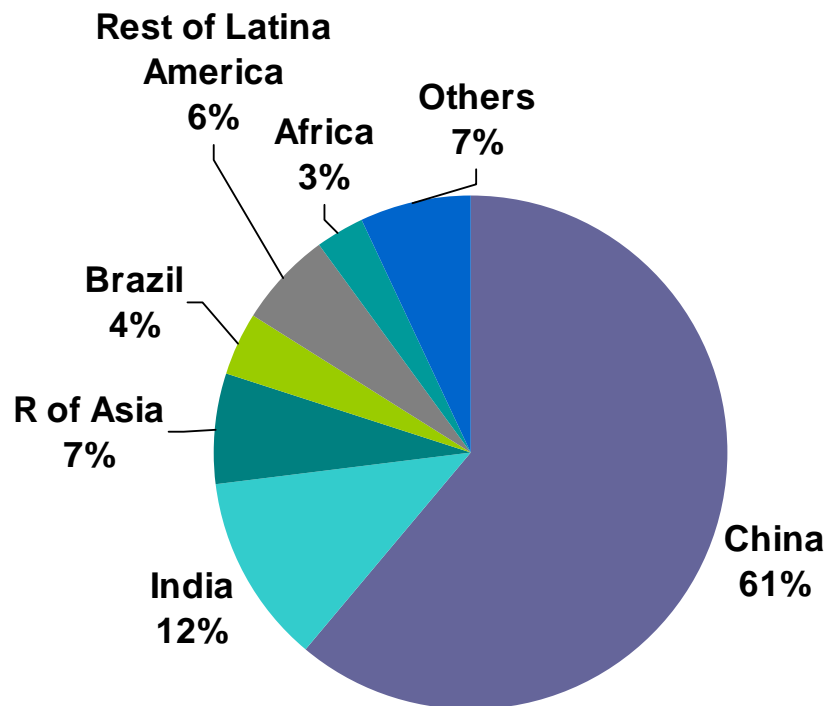
• 53% result from power generation as compared to 40% for rest of world reflecting rapid industrialization.



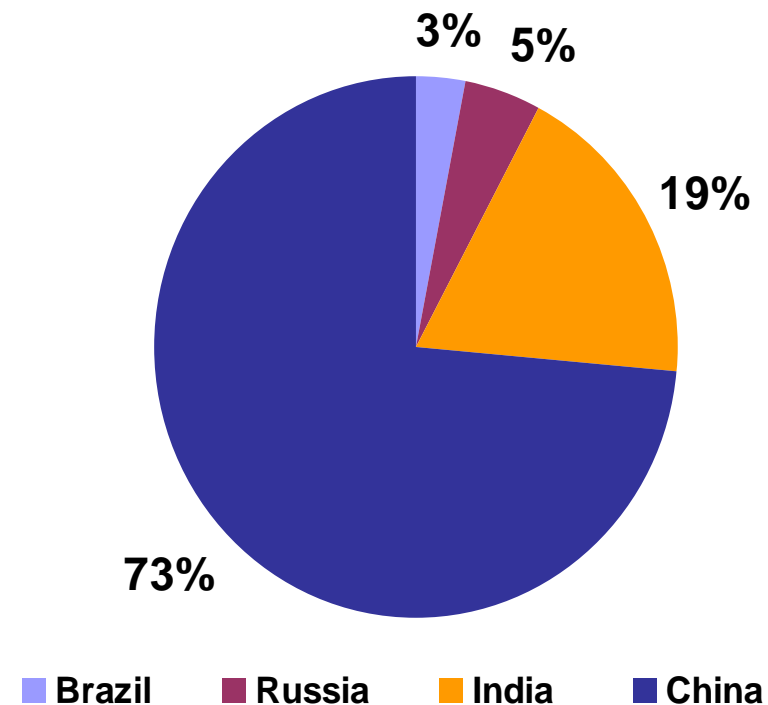
- Reflecting dependence of Chinese growth on exports particularly to the US;
- CO2 trading mechanisms reflect transfer of CO2 emissions and not necessarily reduction.

- Regional Distribution of CDM Projects concentrated in China and secondly India with major power generation concerns;
- Russia and Brazil have lagged due to use of natural gas and hydro-electricity for power;
- Energy for transport has not benefited from carbon trading mechanisms as they require assertive government policies that are not addressed by KT;
- Renewable fuel projects are usually too small for complex carbon trading mechanisms

Location of CDM Projects (Sellers)

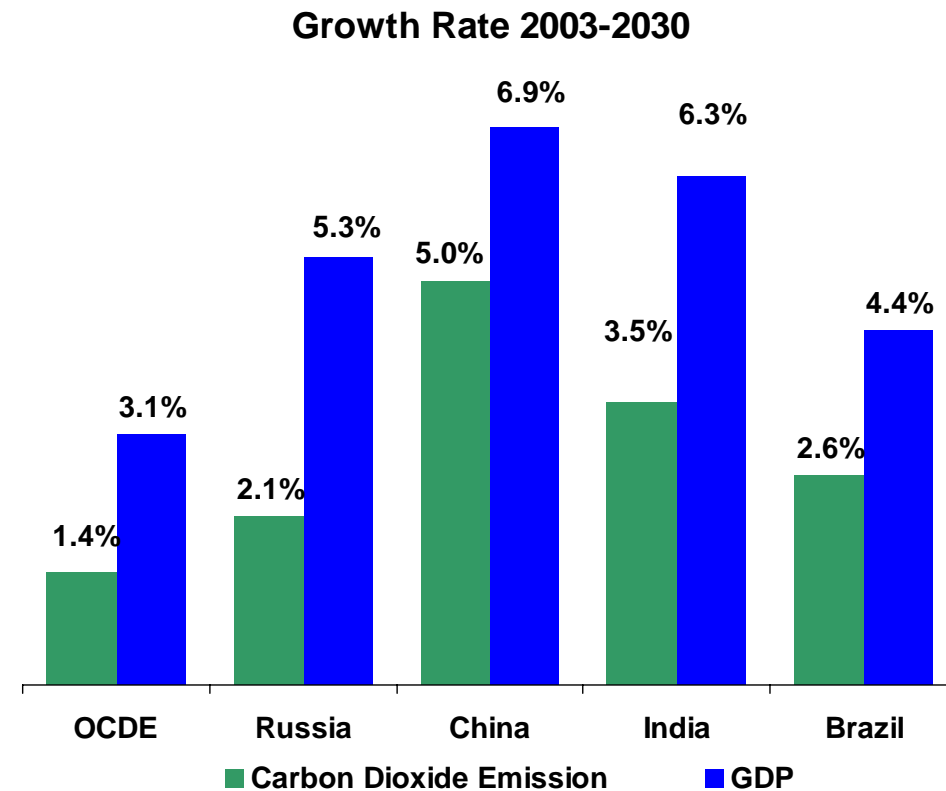
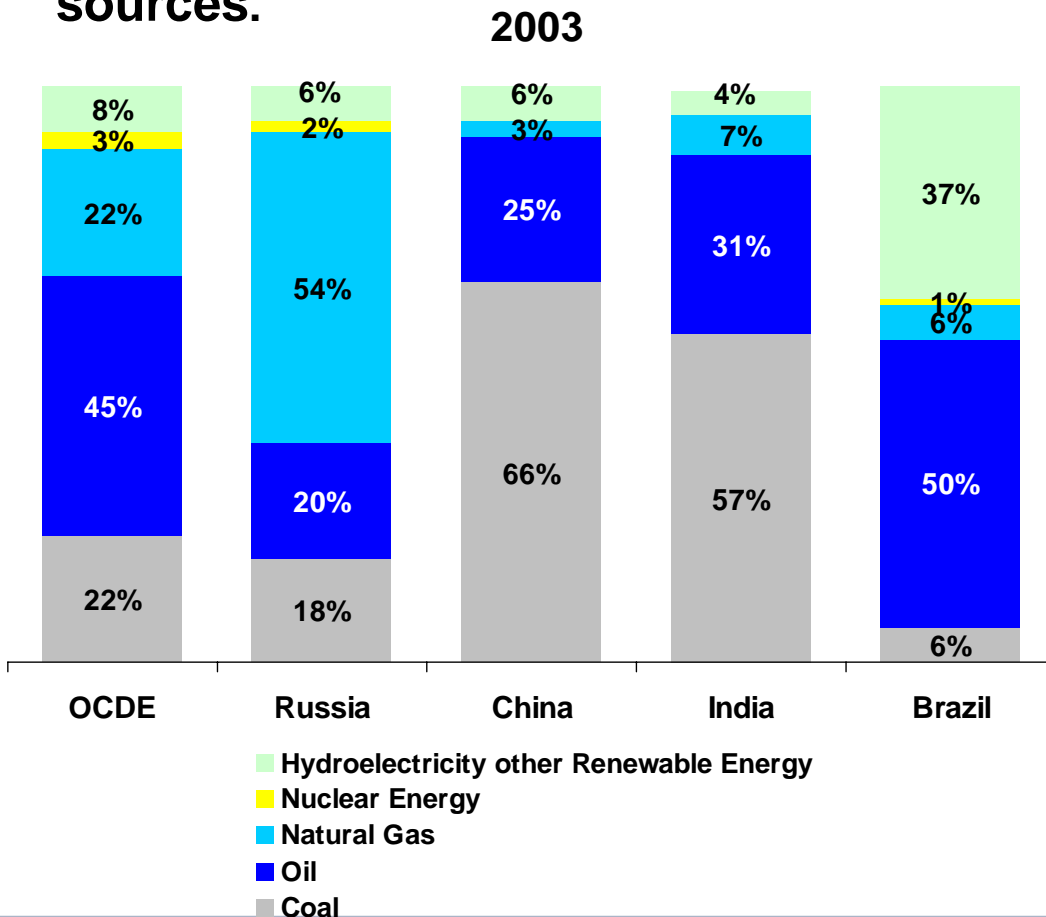


Percentage Share of Projected CO₂ Emissions 2004 - 2030 Reference



BRIC energy consumption patterns are very different and reflect power generation

- China and India high CO2 emissions from oil and coal for power represent more than 91% and 88% respectively;
- Russia predominance of cleaner natural gas represents 54% of energy sources;
- Share of renewable energy sources in Brazil and natural gas represents 43% of energy sources.

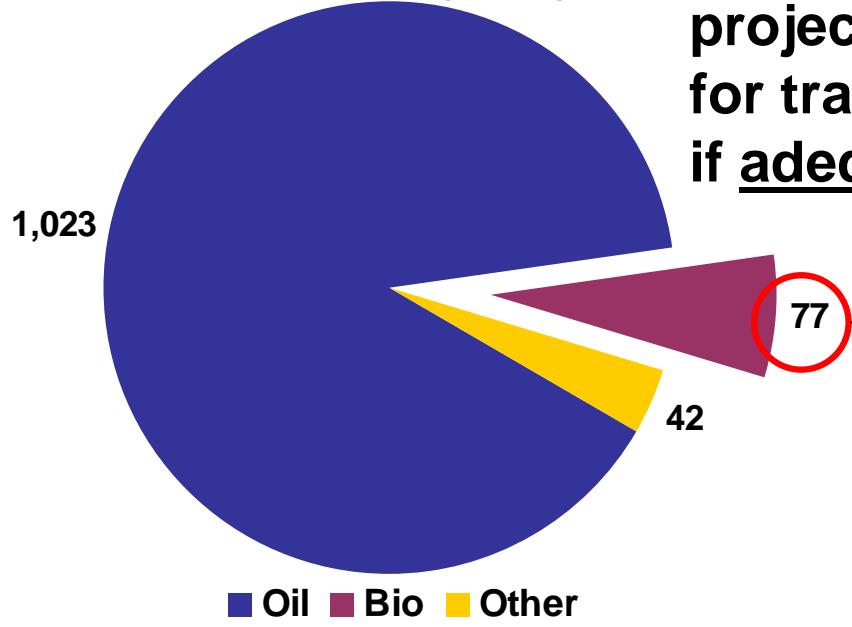


- Projections suggest higher GDP growth and CO2 emissions growth in India and China so that oil and coal surpass 90% of energy consumption;
- Continued use of natural gas in Russia;
- Brazilian use of natural gas and renewables could surpass 50% of consumption by 2030.



But transport sector can still contribute to emission reductions (IEA alternative scenario)

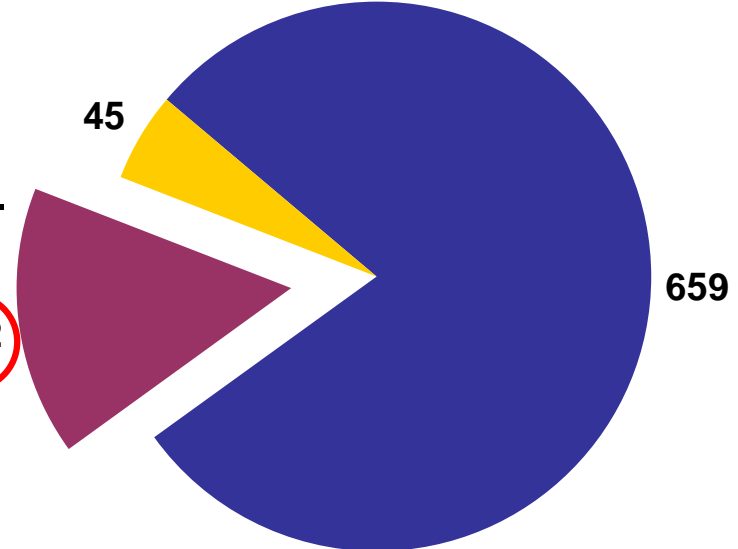
Reference Increase in Demand 2004-2030 (mtoe)



Total: 1,142 mtoe

Increased use of renewable fuels can contribute to reduce projected increase in energy for transport by 7 %, to 15 % if adequate policies followed.

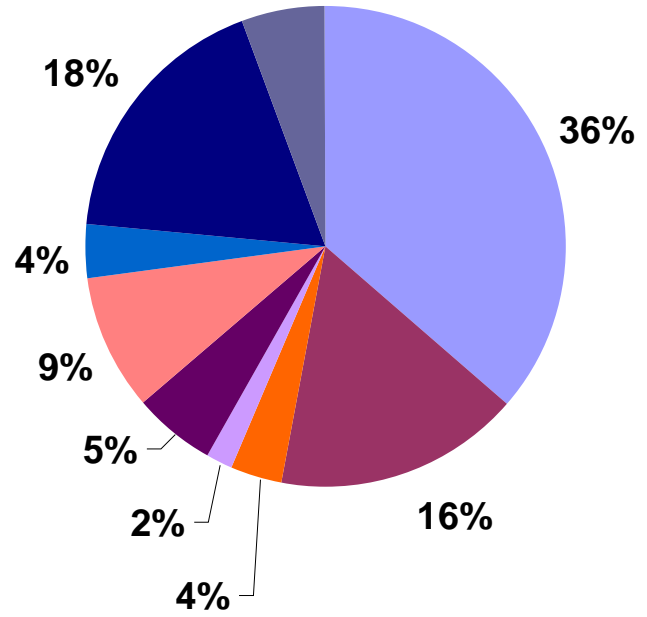
Alternative Increase in Demand 2004-2030 (mtoe)



Oil Bio Other

Total: 836 mtoe

Bio 2004-2030 Reference - Alternative 5%



- United States
- OECD Europe
- OECD Pacific
- Other OECD
- Brazil
- China
- India
- Other Asia
- Rest of World

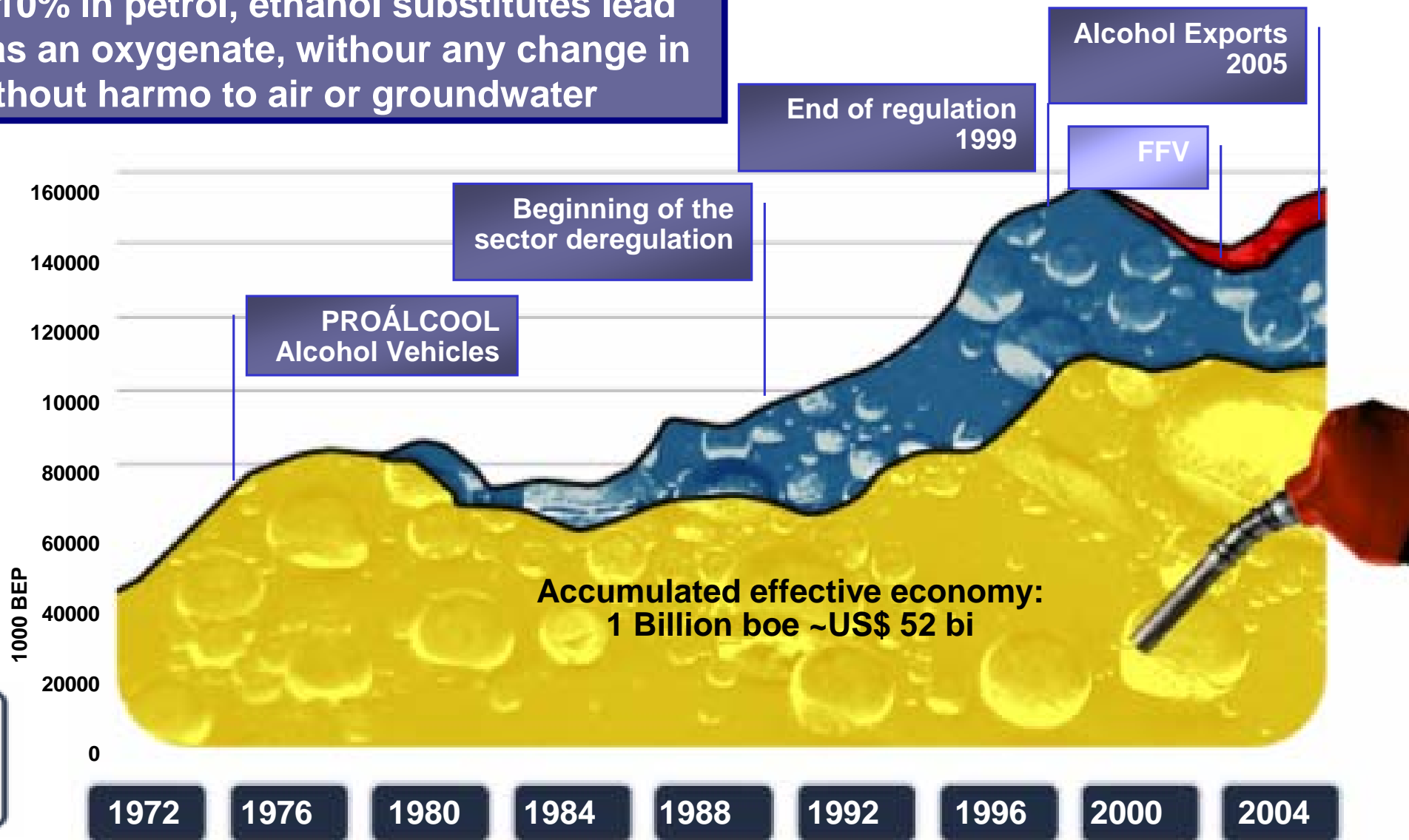
The direct benefits in emission reductions would be equally distributed between US, Europe OECD and the rest of the world

Brazil is the 1st country to reap benefits from Ethanol

Because program is government regulated there are no benefits from KT but benefits of reduction in CO₂ emissions have already materialized;

Used up to 10% in petrol, ethanol substitutes lead and MTBE as an oxygenate, without any change in engines, without harm to air or groundwater

During this period, ethanol utilization saved 644 million ton. of CO₂ emission



Ethanol can be introduced also as a partial or full substitute for petrol: up to 25% (Brazil) partial motor adjustments require participation of automobile industry; up to/over 85% requires flex-fuel vehicles, consumer preference (price/performance).

(Otto Cycle Engines)

Ethanol Blend	Carburetor	Fuel Injection	Fuel Pump	Fuel Pressure Device	Fuel Filter	Ignition System	Evaporative System	Fuel Tank	Catalytic Converter	Basic Engine	Motor Oil	Intake Manifold	Exhaust System	Cold Start System
≤ 5%	----- For any vehicle -----													
5 ~ 10%	----- For vehicles up to 15 ~ 20 years old -----													
10 ~ 25%	Not Necessary	Probably Necessary	Probably Necessary	Probably Necessary	Probably Necessary	Probably Necessary	Probably Necessary	Probably Necessary	Probably Necessary	Probably Necessary	Probably Necessary	Probably Necessary	Probably Necessary	Probably Necessary
25 ~ 85%	Probably Necessary	Probably Necessary	Probably Necessary	Probably Necessary	Probably Necessary	Probably Necessary	Probably Necessary	Probably Necessary	Probably Necessary	Probably Necessary	Probably Necessary	Probably Necessary	Probably Necessary	Probably Necessary
≥ 85%	Probably Necessary	Probably Necessary	Probably Necessary	Probably Necessary	Probably Necessary	Probably Necessary	Probably Necessary	Probably Necessary	Probably Necessary	Probably Necessary	Probably Necessary	Probably Necessary	Probably Necessary	Probably Necessary

Not Necessary

Probably Necessary

Of the original incentives to promote ethanol only lower taxes on vehicles have survived the whole program because of benefits to car manufacturers and consumer preferences:

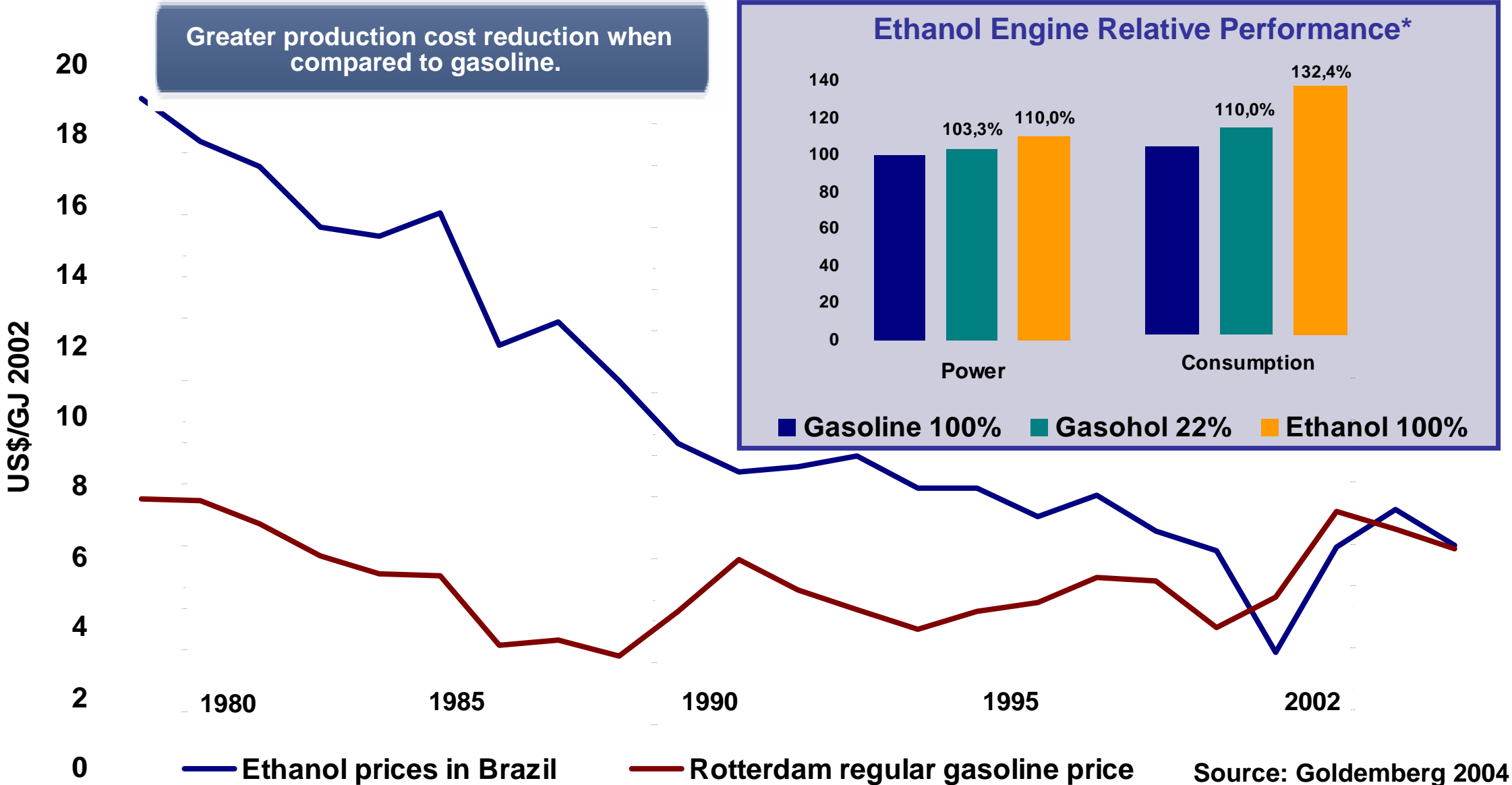
- ~~Ethanol price lower than petrol~~
- ~~Guaranteed return to ethanol producer~~
- Lower taxes for ethanol powered vehicles
- ~~Loans to increase ethanol production~~
- ~~Service stations obliged to sell ethanol~~
- ~~Strategic inventories of ethanol~~

Other tax incentives may be applicable such as circulation taxes, higher taxes on petrol vis a vis ethanol



Brazil has already made substantial progress in cost reduction of ethanol

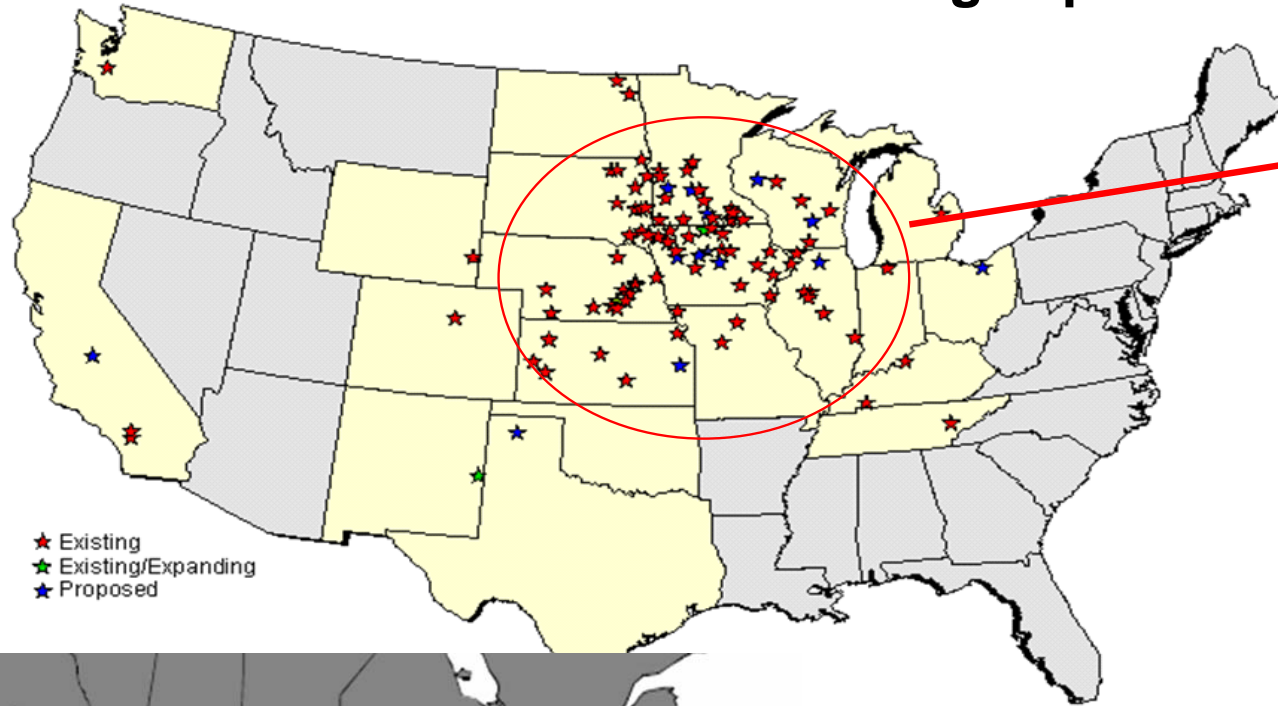
- Substantial savings can and have been achieved in costs of reducing CO2 emissions through renewable fuels but which are not addressed by Kyoto Treaty



*Source: Volkswagen (Brazil) - Presentation prepared for review within The Warren Centre for Advanced Engineering at Sydney University

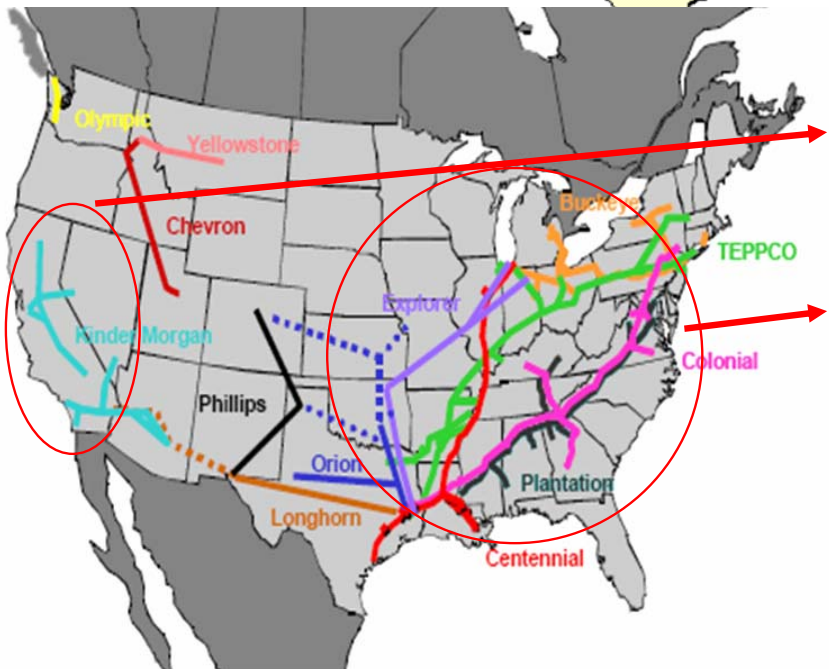
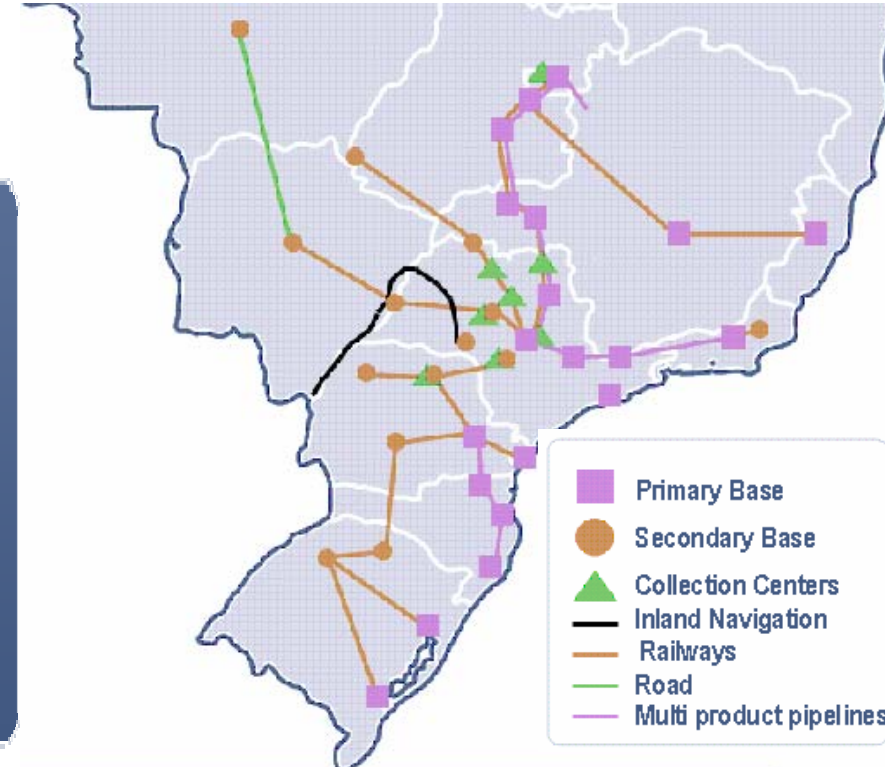
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Incentives are required to develop logistics for renewables in the USA for example; Such as those that exist and are being expanded in Brazil.



US Ethanol producers are concentrated in upper mid-west with little or no integration with oil facilities

Ethanol Logistics System in Brazil



- While most oil and product pipelines run from the south to northeast, north or southwest;
- Shipment in the Pacific will have a comparative advantage in supplying California.

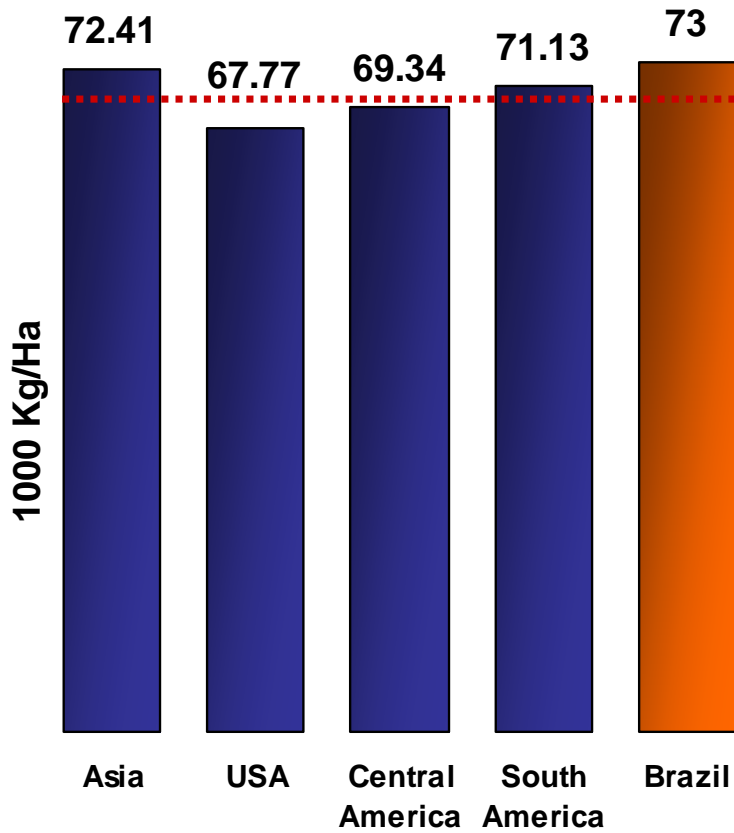


Latin America offers excellent potential to increase ethanol production

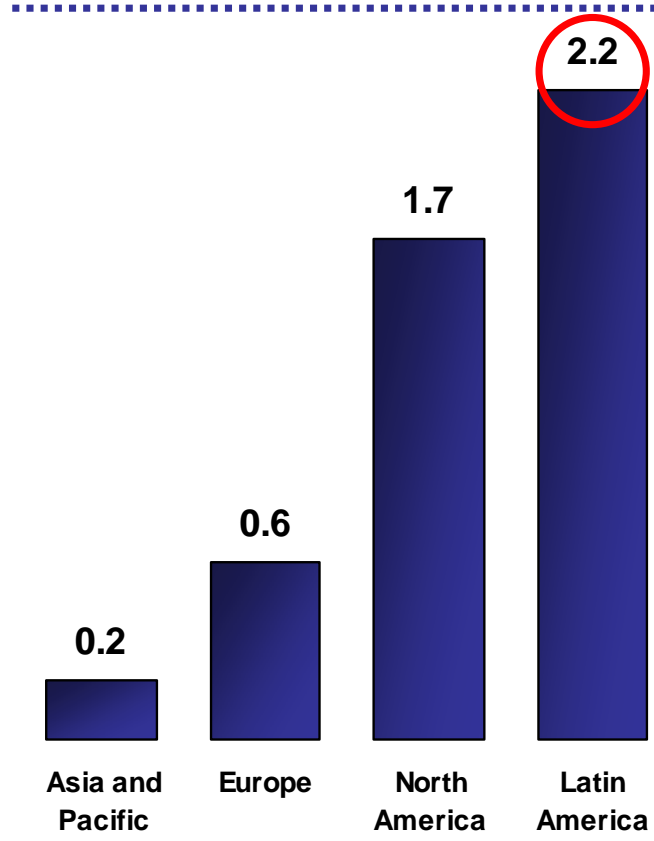
- Incentives are required to associate better use of natural resources which could contribute in reducing and not transferring CO2 emissions;
- Availability of lands, water and low labor cost also benefit production in Central and South America.

Latin America has the largest potential arable land per capita and only uses 13,9% of it.

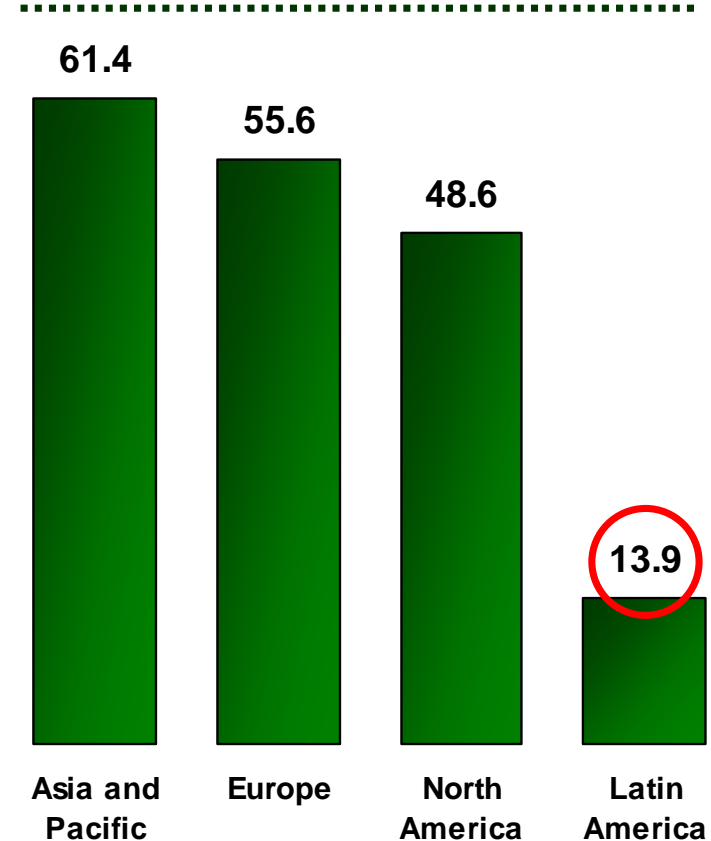
Sugar-Cane Productivity
Yield per Hectar



Potential Arable Land
(1.000 ha per capita)



% of Potential Arable Land
actually in use

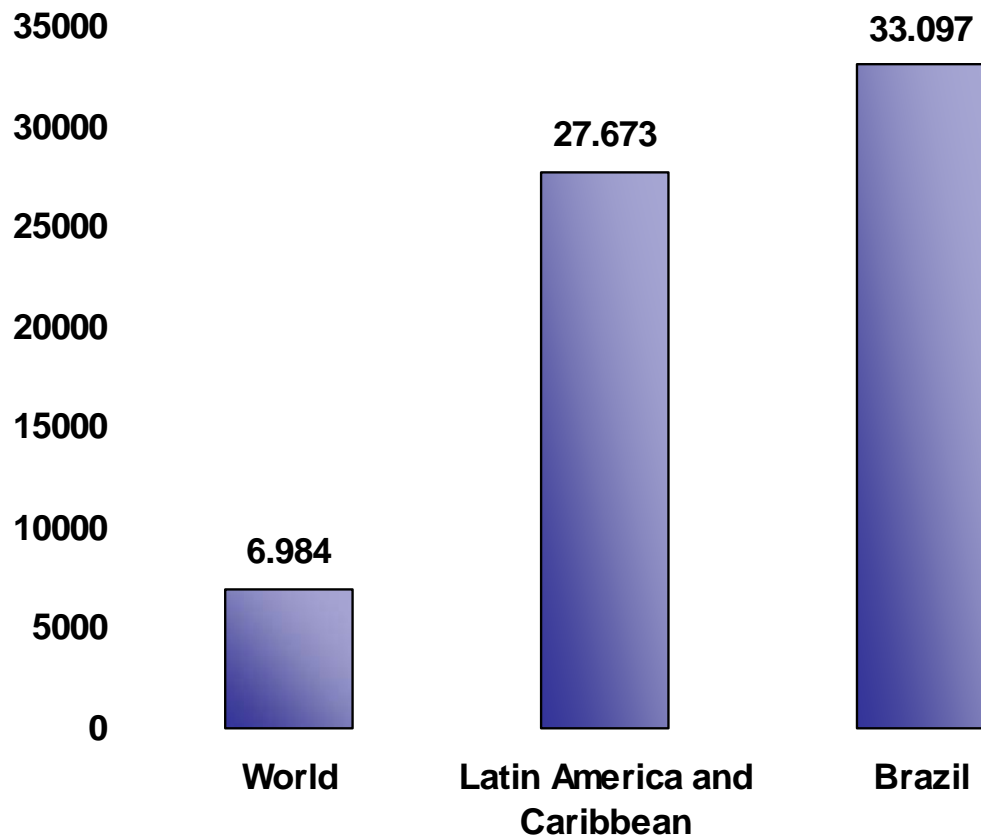


..... World Average

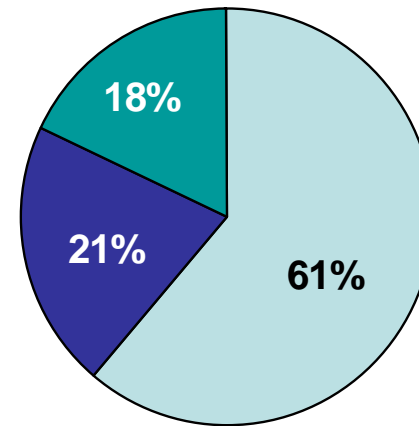
33% of the world's internal renewable water resources are concentrated in Central and Latin America;

Annual water use by sector

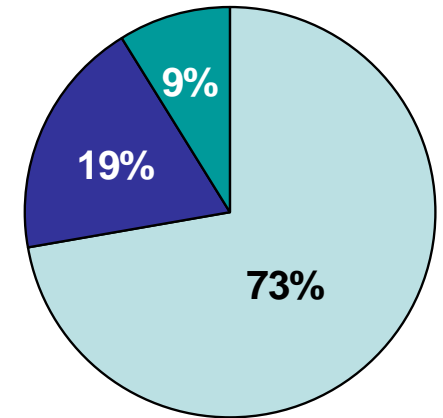
Internal renewable water resources
(m³ per capita – 1997)



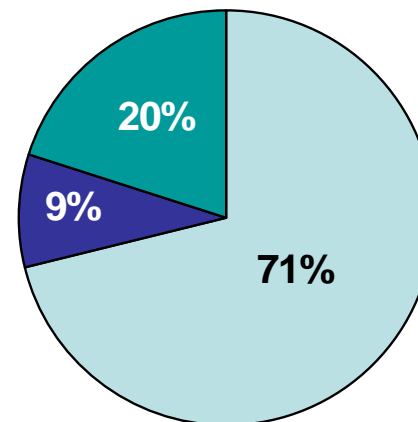
Brazil



Latin America and Caribbean



World



Agriculture
 Domestic
 Industrial



Energy output/input ratio is likely to be greater in tropical climates

Increasing Efficiency in Raw Material Use is not addressed in KT

Raw Material	Energy output / energy input
Wheat	1.2
Corn	1.3 – 1.8
Sugar Beet	1.9
Sugar Cane (under Brazilian Production Conditions)	8.3

Tomorrow

Potential ethanol production would grow by more than 100% based on Lignocelluloses Biomass technology



1 metric ton of
sugar cane



Molasses
yields only 85 l
of ethanol,

But



Cane bagasse
yields 185 L of
ethanol
Base
calculation

Petrobras 2011 CO2 Emission Targets

In line with its sustainability objectives Petrobras has established its own emission targets apart from its efforts in renewable fuels.

To allow the definition of the targets, future GHG emissions were estimated based on the Company's Business Plan for 2007 – 2011, adopting 2005 total GHG emission as an initial reference. The BAU baseline defined this way was then used as a reference to set yearly avoided GHG emission targets, as shown in the following table:

	2006	2007	2008	2009	2010	2011
Avoided GHG emission target (million tones of CO2 equiv)	1.13	1.79	3.56	4.15	3.93	3.93
Percentage of baseline year emissions	2.20%	3.50%	6.90%	8.10%	7.60%	7.60%

The total amount of GHG emissions to be avoided from 2006 to 2011 (18.5 million tonnes of CO2 equivalent) is equivalent to about 36% of the 2005 emission figure (51.56millionCO2e)

Summary

- Bulk of projected emissions come from power generation not transport;
- China and India will benefit most from carbon trading and emission limitations because of coal and oil requirements for power while Russia and Brazil use more cleaner natural gas and hydro for power;
- Renewable fuels are flexible in their implementation but require adequate incentives and taxation mechanisms to encourage participation of entire energy chain (producers, distributors, car manufacturers and consumers)
- Comparative advantage of production in the tropics of renewable fuels requires revision of agricultural trade barriers which are not provided for in Kyoto.